**BILL #** HB 2373 **TITLE:** taxation; solar energy equipment

**SPONSOR:** Mason **STATUS:** As Introduced

**REQUESTED BY:** House **PREPARED BY:** Brian Cary

# FISCAL ANALYSIS

**Description**

Beginning in tax year 2005, the bill would expand the current solar energy income tax credit for individuals and create new tax credits for corporations. The current credit allows individual taxpayers to claim a tax credit for 25% of the cost of solar energy devices installed at a residence. The total amount of the credit is limited to a maximum of $1,000 over five years.

The bill adds a separate credit for residential photovoltaic (PV) power systems, which are eligible for a credit of 15% of the cost of the system or $3,000, whichever is less. A taxpayer could accumulate up to $5,000 in solar energy tax credits per residence, with a carry forward period of five years. Any combination of qualified solar energy systems could apply toward the $5,000 limit, although the credit allowed for a PV system would remain $3,000 or less. The bill limits the credit for any single residential solar energy device other than PV systems to no more than 25% of the cost, with an annual limit of $1,000 per tax year.

This credit would also be expanded to include businesses that install solar energy devices. The bill would allow a credit of 25% of the cost or $5,000 (whichever is less) per tax year for commercial solar energy devices other than PV systems, which would be eligible for a credit of up 15% of the cost or $10,000. The maximum credit available per commercial building would be $25,000. The credits would be non-refundable. The bill also would allow the transfer of the new credits to the "project developer," or to the person who paid for the solar energy device.

**Estimated Impact**

JLBC Staff cannot determine the fiscal impact of the bill with certainty. The estimated incremental revenue loss from the bill would be $(743,000) in FY 2006 and $(1.5) million in FY 2007. The cost to the General Fund could be significantly higher if the credit increases current consumption patterns or if cash rebate programs and federal tax credits are expanded. There are other incentives available to purchasers of solar energy equipment such as cash rebates from electric utilities and federal tax credits. These incentives can reduce the cost of a solar energy system significantly when combined with the credit.

While HB 2373 would lead to a direct reduction in corporate and individual tax liabilities, it would create new investment in solar equipment and higher sales, employment and payrolls for businesses selling and installing the devices. The additional economic activity would lead to an offsetting increase in tax collections. This type of secondary, or dynamic impact, is difficult to estimate. On the other side of the ledger, an undetermined amount of lost sales would be incurred by public utilities supplying electricity and natural gas.

The Department of Revenue (DOR) estimated the bill would produce a minimum incremental revenue loss of $(212,000) per year. This estimate was based on tax year 2001 data and focused on the impact of increasing the maximum credit for individuals from $1,000 to $5,000. It did not address the revenue lost due to extending the credit to businesses and corporations.

**Analysis**

*Existing Tax Credits*

There is uncertainty about the bill's impact due to the behavioral effects of creating new incentives to purchase solar energy devices. The current credit allows individual taxpayers to claim a tax credit for 25% of the cost of solar energy devices installed at a residence. The total amount of the credit is limited to a maximum of $1,000 over five years. A solar device used in a residence may cost from less than $1,000 to well over $20,000. This would include solar day-lighting equipment,

residential water heaters, and low-cost photovoltaic (PV) energy systems. According to industry sources, commercial equipment and higher-rated residential systems are much more expensive. Recent customer rebate programs offered by electric utilities further reduce the cost of these systems.

*Customer Rebate Programs*

Since 2001, the Arizona Corporation Commission (ACC) has adopted an Environmental Portfolio Standard (EPS) that requires regulated utilities to increase the amount of renewable energy generated in the state. In order to meet these requirements, the electric distribution companies have developed programs that provide rebates to customers that install solar energy devices. The rebates significantly reduce the cost of solar energy systems, and demand has grown in recent years to fully utilize the funds provided. The rebates are designed to be used in combination with tax credits to provide customers a financial incentive to purchase solar energy equipment. If additional tax credits such as those provided by HB 2373 are created, the fiscal impact of the credits can be estimated from the customer rebates made available.

Currently, APS is offering $2.75 million per year in rebates for the costs of solar energy systems purchased by customers: $2 million for residential PV systems, $250,000 for solar water heaters, and $500,000 for commercial PV systems. This provides rebates to support the purchase of approximately 500 residential PV systems ($4,000 rebate per system), 350 water heaters ($700 rebate per system), and 12 commercial systems ($40,000 rebate per system). The estimates for PV systems assume that customers qualify for the maximum rebate. If they purchase less expensive systems, a larger number of customers would qualify for a smaller average rebate per system. The average credit per customer would be reduced proportionately, but the total amount of tax credits claimed would remain unchanged. Customers purchasing these systems would qualify for $(1,882,500) in state income tax credits provided by HB 2373.

The Unisource/TEP rebate program is estimated to subsidize the installation of approximately 100 PV systems per year. If the cost per system were assumed to be $20,000 (residential and commercial), these customers would be eligible to claim $300,000 per year in tax credits provided by the bill.

Although not regulated by the ACC, SRP introduced a solar energy rebate program for its customers in late 2004. Initially, SRP is providing $1 million per year in rebates. This is expected so subsidize the purchase of 50 PV systems, generating $150,000 in income tax credits to be provided by the bill.

The three major utilities are offering programs that will generate approximately $(2.3) million in tax credits under the proposed legislation. Without the bill, these programs are estimated to be generating approximately $(848,000) in state tax credits during FY 2005, a difference of $(1.5) million. The cost of the tax year 2005 credits would be realized in FY 2006. We assumed that half of the credit available would be claimed in the first fiscal year and the rest in the second fiscal year. Although tax liability is accrued on a calendar year basis, final tax payments and refunds are not issued until the following calendar year. The tax credits provided by the bill would incrementally reduce revenue to the General Fund by $(743,000) FY 2006 and by $(1.5) million in FY 2007.

*Other Considerations*

In the past, the tax credit was mostly used to offset the cost of solar water heaters. However, a wide range of devices qualify for the credit, including photovoltaic (PV) generators, passive systems, solar day-lighting systems, and others. Recent technological improvements in solar energy systems, combined with tax incentives and other rebates, may make them more economically viable and drive usage by consumers and businesses higher. Industry representatives estimate the cost of PV devices is falling by about 5% per year. Also, it is not known how many individuals may purchase systems regardless of whether they obtain a rebate from the electric utility.

The bill allows tax credits to be transferred to “the project developer” or to the person who paid for the solar energy device. This raises the risk of additional revenue losses not included in this fiscal analysis, since the available tax credits could be spread cross a potentially larger number of buildings and residences.

Over time, the trend in Arizona and in other states has been to require regulated utilities to provide more money for programs such as those described above. In January 2005, the ACC Staff recommended increased funding for EPS programs. The solar equipment purchased with these incentives would qualify for the new credits created by HB 2373. There are also numerous off-grid PV systems throughout Arizona that do not qualify for the utility-sponsored EPS programs. Similar systems installed in 2005 and after would qualify for the tax credits allowed by the bill.

Additionally, there are other incentives making the costs of solar energy systems more attractive to energy users. There is a 10% federal investment tax credit, along with special depreciation schedules, available to corporations that install solar energy equipment. Taken together, there are trends in the solar energy industry that are reducing system costs and raising requirements for utilities to increase the amount of solar energy produced. Demand for solar energy equipment appears to be expanding, which could potentially increase future revenue losses from HB 2373.

**Local Government Impact**

Each year cities and towns receive an amount equal to 15% of income tax collections from two years prior. The reductions in corporate income tax collections would result in a reduction in local government distributions of $(110,000) in FY 2008 and $(220,000) in FY 2009.

2/15/05